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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/817,977 | 03/27/2001 | Thomas Richter | DE000052 | 9868 |

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

LELE, TANMAY S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2684

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,977

Applicant(s)

RICHTER, THOMAS

Examiner

Tanmay S Lele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because "The Figures 2a to 2d..." appears at the bottom. Correction is required. See MPEP § 608.01(b).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1, 4 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline et al. (Kline, US Patent No. 5,768,268) in view of Sriram (Sriram, US Patent No. 6,331,976).

Regarding claim 1, Kline teaches of a network element of an analog, cellular network, notably a mobile radio set or a base station (column 3, lines 41 – 52; note that the embodiment uses AMPS and thus control signaling is digital as known in the art), including receiving means for receiving a wide-band data sequence (column 2, lines 27 – 60) that is composed of a starting synchronization (DOT1) (column 8, lines 25 – 28), a word synchronization (WS) (column 8, lines 25 – 28), a data word (REP1) (column 8, lines 25 – 28) and a fixed number of repeats of a further synchronization (DOT) (column 8, lines 22 – 31), a word synchronization (WS) (column 8, lines 22 – 31) and the data word (REP2-REP11) (column 8, lines 22 – 31) as well as evaluation means for recognizing that a transmission of a data sequence takes place when a starting synchronization (DOT1) has been recognized (column 11, lines 45 – 56).

Kline does not specifically teach of or alternatively one of the further synchronizations (DOT), succeeded by a correct word synchronization (WS), has been recognized, and for evaluating data words (REP1-REP11) received each time subsequent to a recognized starting synchronization (DOT1) that is succeeded by a word synchronization (WS), or received

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subsequent to a recognized further synchronization (DOT) that is succeeded by a correct word synchronization (WS).

In a related art dealing with synchronization from words, Sriram teaches of or alternatively one of the further synchronizations (DOT) (Figure 3 and column 2, lines 34 – 45 and column 5, lines 3 – 24), succeeded by a correct word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 and column 5, lines 25 – 30 and column 5, lines 34 – 38), has been recognized, and for evaluating data words (REP1-REP11) received each time subsequent to a recognized starting synchronization (DOT1) that is succeeded by a word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 and column 6, lines 7 – 19), or received subsequent to a recognized further synchronization (DOT) that is succeeded by a correct word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 column 5, lines 3 – 24 and column 5, lines 25 – 30 and column 5, lines 34 – 38).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline's wideband data system, Sriram's detection methods, for the purposes of surer detection (and thus synchronization) in order to properly demodulate a signal, as taught by Sriram.

Regarding claim 4, Kline in view of Sriram, teach all the claimed limitations as recited in claim 1. Sriram further teaches of characterized in that the evaluation means include a memory for storing a correct starting synchronization (DOT1) (column 5, lines 38 – 45 column 7, lines 55 – 65 and column 8, lines 15 – 23) and a data buffer which has a capacity at least equal to the starting synchronization for the bit-wise storage and shifting through of the received data (column 8, lines 15 – 29), as well as comparison means for the continuous bit-wise comparison

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of the stored memory contents with the data buffer contents and for determining the number (dd(rx)) of deviating bits (Table 1 column 5, lines 38 – 45 column 7, lines 55 –65 and column 8, lines 15 – 23) and, the evaluation means being arranged to decide that a starting synchronization (DOT1) has commenced when the number (dd(rx)) of deviating bits is less than a predetermined number (dd.sub.min) (Tables 1 and 2 and column 5, lines 38 – 45 column 7, lines 55 –65 and column 8, lines 15 – 23), and that a starting synchronization (DOT1) has been correctly received when the number (dd(rx)) of deviating bits reaches zero (Tables 1 and 2 and column 7, lines 1 – 26 and column 7, lines 55 –65 and column 8, lines 15 – 23).

Regarding claim 5, Kline in view of Sriram teach all the claimed limitations as recited in claim 1. Sriram further teaches of characterized in that the evaluation means are arranged to assume the occurrence of a change over to the second data sequence in the case of disturbed starting synchronizations (DOT1) of two directly successive data sequences after expiration of the temporal length of a data sequence as from the beginning of a first recognized synchronization (DOT) that is succeeded by a correct word synchronization (WS) (Figures 4a – 4c and column 7, lines 1 – 26).

Regarding claim 6, Kline teaches of a method for a network element of an analog, cellular network, notably a mobile radio set or a base station, for receiving a data sequence (column 3, lines 41 – 52; note that the embodiment uses AMPS and thus control signaling is digital as known in the art), that is composed of a starting synchronization (DOT1) (column 8, lines 25 –28), a word synchronization (WS) (column 8, lines 25 –28), a data word (REP1) (column 8, lines 25 –28) and a fixed number of repeats of a further synchronization (DOT), a word synchronization (WS) and the data word (REP2-REP11) (column 8, lines 22 – 31), which

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method includes the following steps: a) continuously monitoring the arrival of wide-band data streams, if any, in order to recognize whether a data transmission intended for the network element takes place (column 2, lines 26 – 36), b) determining whether a starting synchronization (DOT1) can be recognized in received data streams (column 11, lines 45 – 56)

Kline does not specifically teach of or whether a further synchronization (DOT) that is succeeded by a correct word synchronization (WS) can be recognized, and c) evaluating the data words (REP1-REP11) subsequent to a recognized starting synchronization (DOT1) or subsequent to a combination of a further recognized synchronization (DOT) and a correctly received word synchronization (WS).

In a related art dealing with synchronization from words, Sriram teaches of or whether a further synchronization (DOT) (Figure 3 and column 2, lines 34 – 45 and column 5, lines 3 – 24) that is succeeded by a correct word synchronization (WS) can be recognized (Figure 3 and column 2, lines 34 – 45 and column 5, lines 25 – 30 and column 5, lines 34 – 38), and c) evaluating the data words (REP1-REP11) subsequent to a recognized starting synchronization (DOT1) or subsequent to a combination of a further recognized synchronization (DOT) and a correctly received word synchronization (WS) (Figure 3 and column 2, lines 34 – 45 column 5, lines 3 – 24 and column 5, lines 25 – 30 and column 5, lines 34 – 38).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline's wideband data system, Sriram's detection methods, for the purposes of surer detection (and thus synchronization) in order to properly demodulate a signal, as taught by Sriram.

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4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kline et al. (Kline, US Patent No. 5,768,268) in view of Sriram (Sriram, US Patent No. 6,331,976) as applied to claim 1 above, and further in view of Childress et al. (Childress, US Patent No. 4,905,234).

Regarding claim 2, Kline in view of Sriram teach all the claimed limitations as recited in claim 1. Kline in view of Sriram do not specifically teach of characterized in that the evaluation means are arranged to use a received data sequence as a basis for the selection of a data word when the data sequence yields at least a predetermined number of correctly received repeats of the data word (REP1-REP11).

In a related art dealing with synchronization techniques, Childress teaches of characterized in that the evaluation means are arranged to use a received data sequence as a basis for the selection of a data word when the data sequence yields at least a predetermined number of correctly received repeats of the data word (REP1-REP11) (column 11, lines 35 –50).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline and Sriram's wideband data system, Childress' repeats, for the purpose of providing redundancy (by ensuring data was receive properly several times and thus eliminating the possibility of improper synchronization due to bit errors) to ensure proper synchronization, as taught by Childress.

Regarding claim 3, Kline in view of Sriram teach all the claimed limitations as recited in claim 1. Kline in view of Sriram do not specifically teach of characterized in that the evaluation means are arranged to select for further processing that repeat from the received repeats of a data word (REP1-REP11) in a data sequence that occurs most frequently.

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In a related art dealing with synchronization techniques, Childress teaches of characterized in that the evaluation means are arranged to select for further processing that repeat from the received repeats of a data word (REP1-REP11) in a data sequence that occurs most frequently (column 11, lines 21 – 50).

It would have been obvious to one skilled in the art at the time of invention to have included into Kline and Sriram's wideband data system, Childress' repeats, for the purpose of providing redundancy (by ensuring data was receive properly several times and thus eliminating the possibility of improper synchronization due to bit errors) to ensure proper synchronization, as taught by Childress.

Citation of Pertinent Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

| Inventor | Publication | Number | Disclosure |
|------------------|-------------|------------|--|
| Inagami | US Patent | 5,058, 203 | Mobile Telephone Terminal Having Selectively Used Processor Unit for Low Power Consumption |
| Kivari et al. | US Patent | 5,430,740 | Indication of data blocks in a frame received by a mobile phone |
| Carneheim et al. | US Patent | 6,215,798 | Multi-frame synchronization for parallel channel transmissions |


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanmay S Lele whose telephone number is (703) 305-3462. The examiner can normally be reached on 9 - 6:30 PM Monday – Thursdays and on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (703) 308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.


Tanmay S Lele
Examiner
Art Unit 2684

tsl
October 17, 2003


NAY MAUNG
SUPERVISORY PATENT EXAMINER